Powering Business Worldwide

Table of Contents

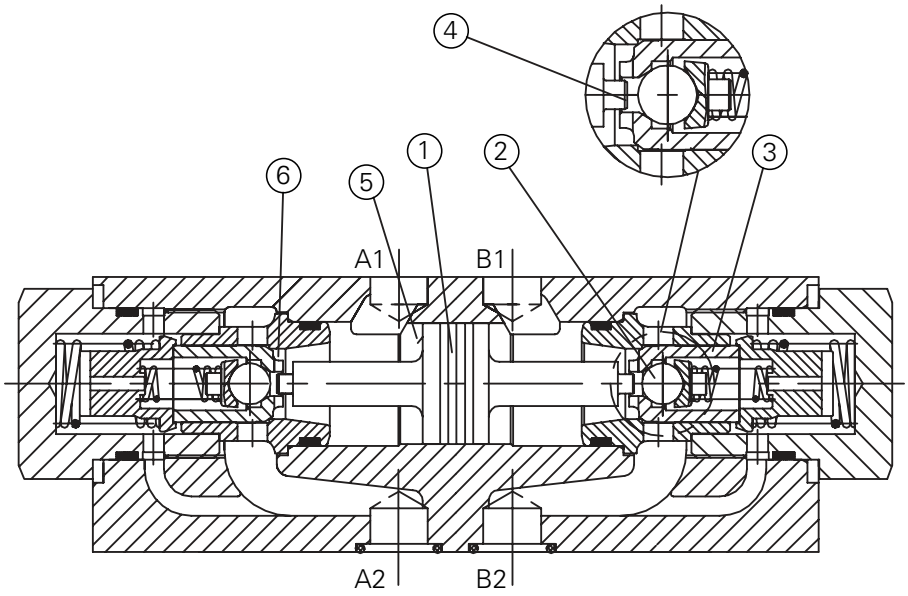
Series DGMPC-H8
General
Description

Features:

- Industry Standard Mounting, ISO 4001-8, NFPA T 3.51 M R1 and ANSI B 93.7 D08
- For use in vertical stacking assemblies
- For the leak free closure of one or both service ports

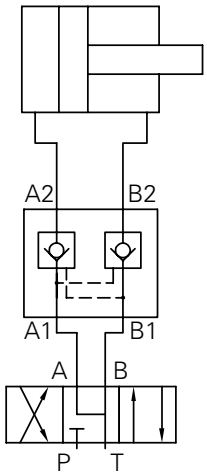
General

The DGMPC hydraulic operated check valve is of a sandwich plate design. They are used for leak-free closure of one or both service ports, even for long periods of time. Free flow occurs from A1 to A2 or B1 to B2. Flow in the opposite direction is blocked. The fluid flows from A1 to A2, the piston (1) is pressurized and is pushed to the right, thereby opening the ball poppet (2) which then opens the main poppet (3). In order to ensure correct closing of the valve, the service ports of the directional valve must be connected to tank in the neutral position (see typical circuit).

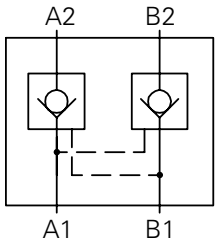


1 Piston
2 Ball Poppet
3 Main Poppet
4 Area A1
5 Area A2
6 Area A3

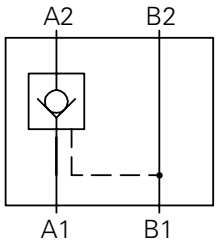
Typical Circuit



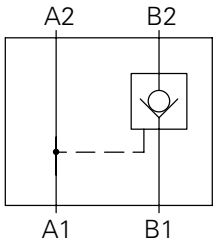
Symbols



AB*- BA*



AB*



BA*

Series DGMPC-H8
Model Code

(F3) DGMPC H8 AB * (BA) (*) 10

1 2 3 4 5 6 7 8

1 **Seal Options**

F3 – Fluorocarbon seals, for Phosphate Ester (class L - HFD)

Blank – Nitrile, for Mineral oil Anti-wear hydraulic oil (class L - HM), Invert emulsion (class L - HFB) Water glycol (class L - HFC)

2 **Stack module, piloted operated check valve**

3 **Size**

D08

4 **Check Valve Line**

AB - A piloted from B
BA - B piloted from A
(Single line only)

5 **Cracking Pressure**

K – 3 Bar
L – 5 Bar
M – 7.5 Bar
N – 10 Bar

6 **Check Valve Line**

BA - B piloted from A
(Dual line only)

7 **Cracking Pressure (Dual line only)**

K – 3 Bar
L – 5 Bar
M – 7.5 Bar
N – 10 Bar

8 **Design Number**

10

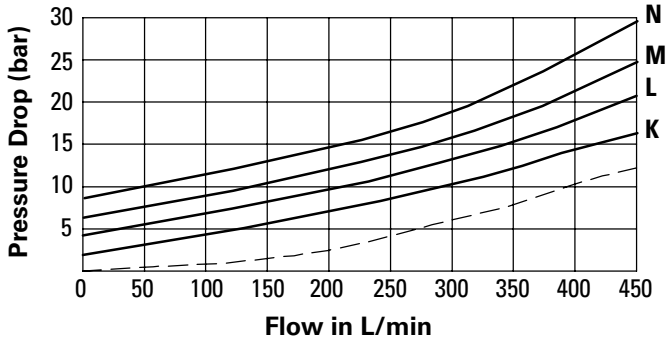
Technical Data

Maximum Flow (L/min)	450
Maximum Operating Pressure (bar)	315
Cracking Pressure	See "Characteristic Curves" graph page 3
Area Ratio	A1/A2 = 1/13.6;A3/A2 = 1/2.8
Fluid	Mineral oils or phosphate ester
Fluid Temperature Range (ºC)	-20 to 80
Fluid Viscosity Range (mm^2/S)	2.8 to 500
Fluid Cleanliness Level (ISO)	19/17/14
Weight (Kg)	12

Characteristic Curves (measured at v = 41 mm^2/s and t = 50ºC)

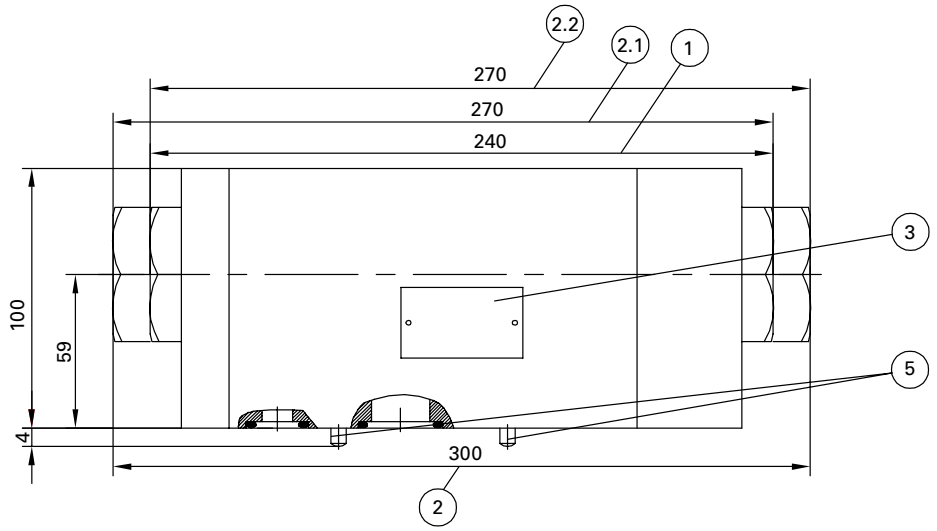
Solid Line
A1 - A2; B1 - B2

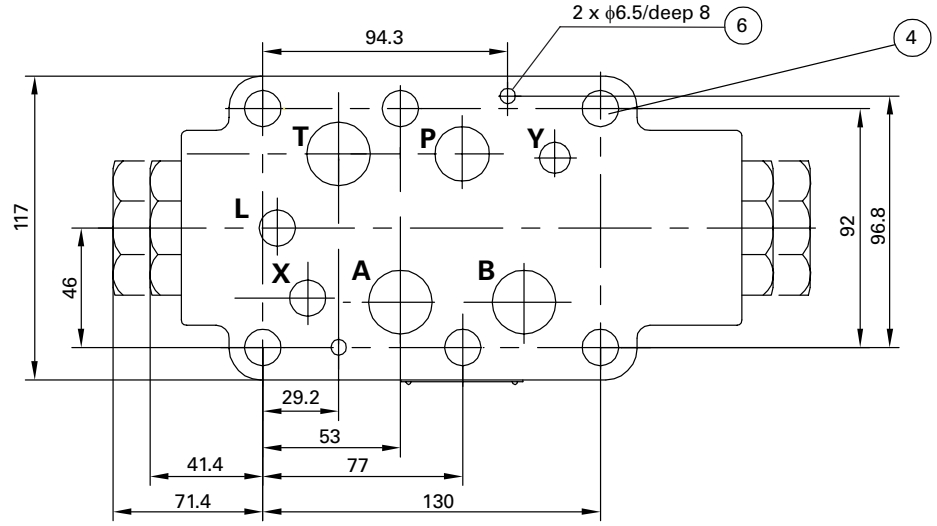
Dotted Line
A2 - A1; B2 - B1



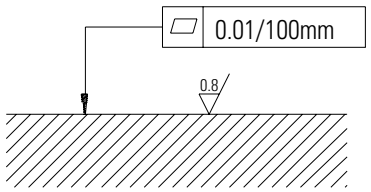
Cracking Pressure:
K = 3 bar
L = 5 bar
M = 7.5 bar
N = 10 bar

Series DGMPC-H8
Unit Dimensions
(Dimensions in mm)





Required surface finish of mating face



1 Cracking pressure 3 bar or 5 bar, check valve on both ports A and B
2 Cracking pressure 7.5 bar or 10 bar, check valve on both ports A and B
2.1 Cracking pressure 7.5 bar or 10 bar, check valve on port A
2.2 Cracking pressure 7.5 bar or 10 bar, check valve on port B
3 Name plate
4 Valve mounting holes, 6 x 15mm
5 Locating pins
6 Locating pin hole

Mounting bolts: ½-UNC, SAE, Grade 8; M14, DIN912-10.9; ISO 898, Class 12.9
Torque 150 lb-ft (250 Nm)
O-rings: 27mm x 3mm for ports A,B,P and T.
O-rings: 19mm x 3mm for ports X,Y, and L.

Series DGMFN-H8
General Description

Features:

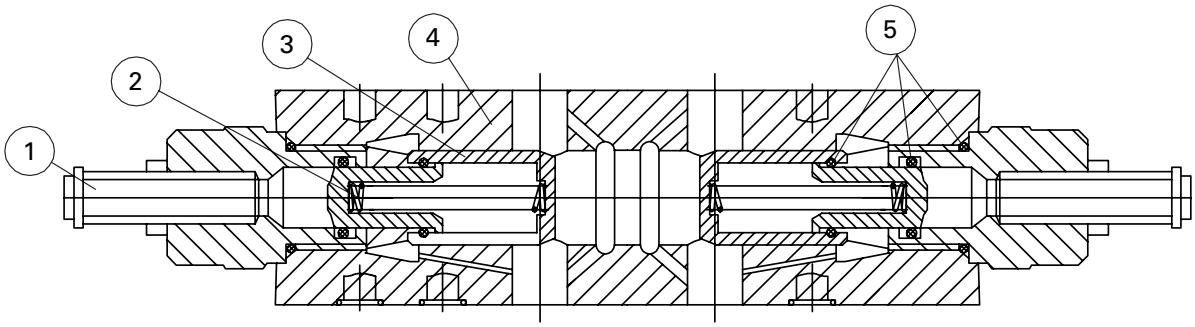
- Industry standard mounting, ISO 4401-8, NFPNA-T-3 .5.1-M-R-I, ANSI B 93.7 D08
- Sandwich plate design
- Limiting of main flow of two actuator ports
- Meter-in or meter-out control

General

DGMFN valves have double throttle/check valves in a sandwich plate design. They are used to limit main flow at one or two actuator ports. Two symmetrically arranged throttle/check valves limit flow (by means of adjustable throttle spools) in one direction and permit free return flow in the other direction.

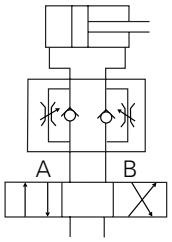
Main flow limiting

The double throttle/check valve is fitted between the directional valve and the subplate to change the speed of an actuator (main flow limiting)

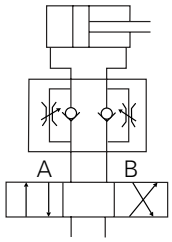


1 Throttle Adjustment Screw
2 Spring
3 Spool
4 Valve Body
5 O-Ring

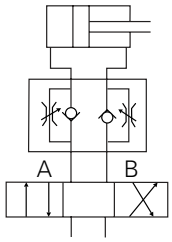
Symbols



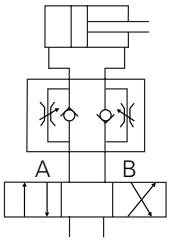
Meter-in control...X



Meter-out control...Y



A Meter-out control
B Meter-in control: YX



A Meter-in control
B Meter-out control: XY

Series DGMFN-H8
Model Code

F3 DGMFN H8 * A2W-B2W 10

1 2 3 4 5 6

1 Seal Options

F3 – Fluorocarbon seals, for Phosphate Ester (class L - HFD)

Blank – Nitrile, for Mineral oil Anti-wear hydraulic oil (class L - HM), Invert emulsion (class L - HFB) Water glycol (class L - HFC)

2 Stack module, throttle valve with check

3 Size

D08

4 Direction of flow control

Y – Meter out
X – Meter in
YX – Meter out A, meter in B
XY – Meter in A, meter out B

5 Control line (Wrench adjustment)

Both port A and B

6 Design number

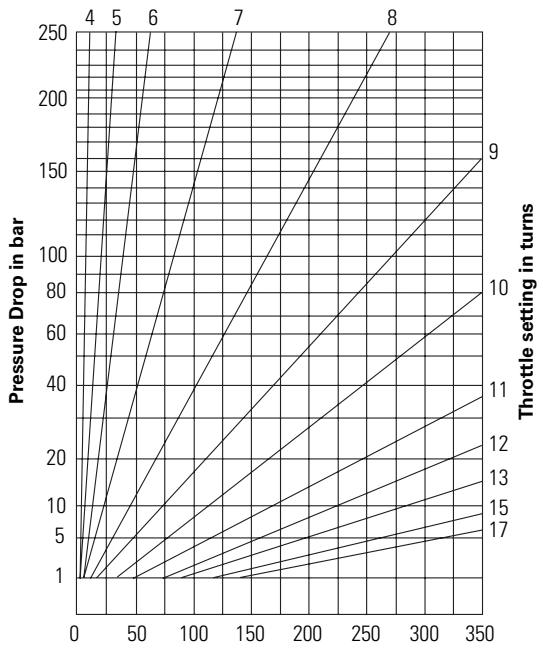
Technical Data

Maximum Flow (L/min)	350
Maximum Working Pressure (bar)	315
Fluid	Mineral oils or phosphate ester
Fluid Temperature Range (°C)	-20 to + 80
Fluid Viscosity Range (mm²/S)	2.8 to 500
Fluid Cleanliness Level (ISO)	19/17/14
Weight (Kg)	8

Characteristic Curves (measured at v = 41 mm²/s and t = 50°C)

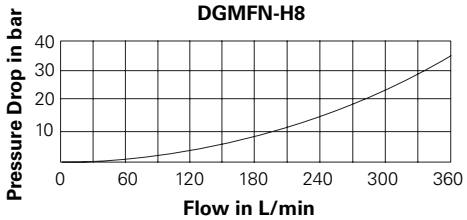
Throttle flow pressure drop

DGMFN-H8

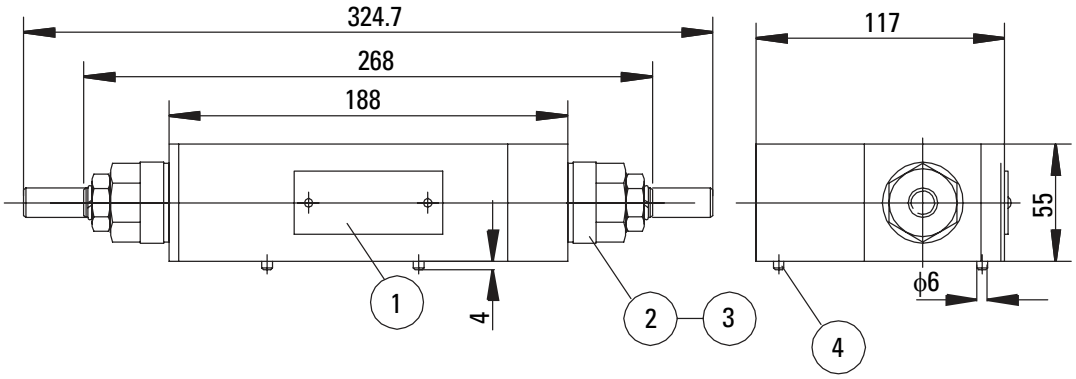


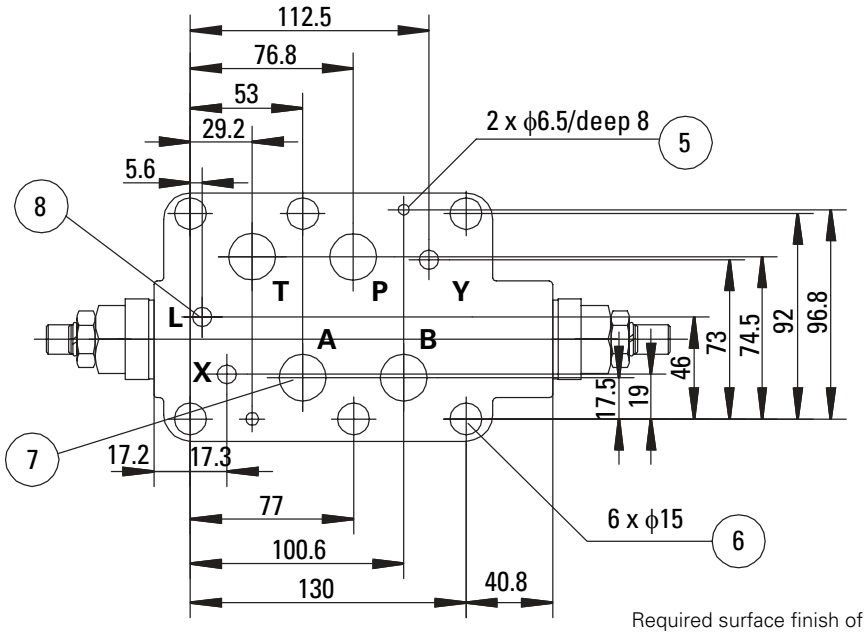
Check free flow pressure drop

DGMFN-H8

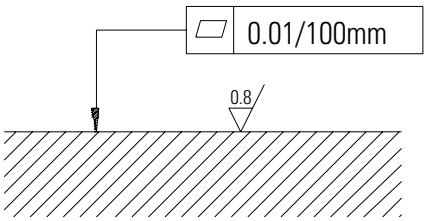


Series DGMFN-H8
Unit Dimensions
(Dimensions in mm)





Required surface finish of mating face



1 Name plate
2 Screw for flow adjustment
3 Turn anti-clockwise = increases flow, turn clockwise = decreases flow
4 Two locating pins
5 Two locating pin holes
6 Valve mounting holes
7 O-ring ports A,B,P,T
8 O-ring ports X,Y,L

Mounting bolts: ½-UNC, SAE, Grade 8; M14, DIN912-10.9; ISO 898, Class 12.9
Torque 150 lb-ft (250 Nm)
O-Ring: 27mm x 3mm for port A,B,P and T
O-Ring: 19mm x 3mm for port X,Y, and L

Released Part Numbers

Model Code	Part Number
DGMFN-H8-X-A2W-B2W-10	**02-413087**
DGMFN-H8-Y-A2W-B2W-10	**02-413088**
F3-DGMFN-H8-X-A2W-B2W-10	02-413089
F3-DGMFN-H8-Y-A2W-B2W-10	02-413090
DGMPC-H8-ABK-10	02-413112
DGMPC-H8-ABK-BAK-10	**02-413055**
DGMPC-H8-ABL-10	02-413054
DGMPC-H8-ABL-BAL-10	02-413056
DGMPC-H8-BAK-10	02-413114
DGMPC-H8-BAL-10	02-413059
F3-DGMPC-H8-ABK-10	02-413113
F3-DGMPC-H8-ABK-BAK-10	02-413058
F3-DGMPC-H8-ABL-10	02-413057
F3-DGMPC-H8-BAK-10	02-413115
F3-DGMPC-H8-BAL-10	02-413060
Seal Kit	02-413807
Seal Kit (F3)	02-413828

Note: Items in bold have better lead-times.

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